

REMARKS

Claim Objection - Claim 14

Claim 14 stands objected to because of its dependency on claim 7. For proper antecedent purposes the claim should depend instead from claim 8. The claim has been so amended.

Claim Rejections - 35 USC §103(a)

The Examiner rejects claims 1-4, 6, 7, 9 and 10 under 35 USC §103(a) as being unpatentable over Thompson (US 4,561,043) in view of Hulse (US 6,550,952).

Thompson describes a decorative light display that comprises a translucent rod coupled to a light source, wherein the rod comprises one or more exit windows which are etched portions of the rod that allow the light to exit the rod. In one embodiment, the Thompson arrangement comprises a tube in which the rod is disposed, where the tube may be transparent or translucent.

The Examiner asserts that Thompson teaches all of the features of claim 1 except for the following three features: 1) the elongate member (16) is transparent; 2) the light source as an LED; or 3) the gas space is about 2 mm. The Examiner considers each of these features to be disclosed in Hulse, and further considers that one of ordinary skill in the art would find it obvious to incorporate these features into the Thompson device and arrive at the presently claimed invention.

However, the applicant respectfully disagrees with the Examiner and contends that claim 1 is not obvious in light of Thompson in view of Hulse.

First, if a higher level of brightness with lower losses was required in the elongate member, any benefits gained by replacing the translucent rod of Thompson with the rod of Hulse would be offset by retaining a translucent outer tube. Instead, if Thompson and Hulse were combined in this manner, one skilled in the art would be motivated to use a transparent tube, as also taught by Thompson, so that the higher level of brightness achieved was not dulled.

Secondly, even in the event that one of ordinary skill in the art would replace the elongate member of Thompson with the one of Hulse, and replaces the light source of

Thompson with the LED, it certainly would not be obvious to modify the device further such that the width of the gas space is about 2 mm. In particular, it is noted that both of Thompson and Hulse describe illumination devices that operate in distinctly different manners when compared to the presently claimed invention. Therefore, there would be no motivation whatsoever to make the particular combination of features that the examiner asserts would be made, and then further modify the resulting device so that an effect is produced that is taught in neither document. Indeed, the specific arrangement claimed in claim 1 gives rise to a surprising, and useful effect that is not taught or realized in the cited prior art (i.e. this result is unexpected relative to the prior art – MPEP 2144.05).

In particular, the elongate transparent member functions as a leaky wave guide that allows light to escape into the gas space when secondary diffusion occurs. The spacing of the second translucent member is such that the secondarily diffused light is diffused by the translucent member and the translucent member is illuminated whilst total internal reflection in the transparent member is not destroyed. Thus, the translucent tube acts to localize the scatter from the transparent rod so that a uniform light source is created which appears to radiate uniformly in all directions, as viewed by an external viewer. This has the distinct advantage that light exiting the transparent member at low angles can be viewed at all angles by a viewer, since the light is diffused by the translucent member. Also, in embodiments of the present invention where there are discrete areas of the transparent member where light exits, the diffusing translucent member acts to produce a substantially uniform light source again. Similarly, the 2mm gap and the translucent member mask any imperfections in the surface of the transparent member.

None of these effects are taught or suggested in Thompson or Hulse. Indeed, no consideration is given as to the spacing of the “outer tubes” from the “rods” in either document. This is highlighted by the fact that in both documents, it is taught that the outer tubes are not essential and, even when present, may not necessarily be translucent. This is in

stark contrast to the presently claimed invention where the translucent member is absolutely required, and is required to be arranged with a specific spacing of about 2 mm between it and the transparent member.

It follows that, without realization of the effects of the present invention and the advantages which it produces, one of ordinary skill in the art would have no motivation to combine Hulse with Thompson in the required manner and then further modify the resulting device to specifically produce a gap of about 2 mm. Neither Thompson nor Hulse describe the diffusion of light as being a sought after feature. Thompson specifically and deliberately has discrete windows that produce concentrated areas of light, and Hulse describes embodiments where letters and numbers are illuminated and visible. Therefore, by the teaching of both documents, one of ordinary skill in the art would see the diffusion of light by the outer tube to be a disadvantage and would be discouraged from creating a combination of features from both documents having a specific arrangement (i.e. spacing of about 2 mm) where this effect might be manifested (MPEP 2144.05).

Furthermore, it is noted that a gap of about 2 mm is very small and very specific and one skilled in the art would not be motivated to select this specific spacing as a matter of design choice, particularly considering that typical uses for the Thompson and Hulse devices are described to be in the technical field of illuminative signage, where the dimensions considered are large so as to be visible from distance.

Thus, claim 1 is patentable over Thompson in view of Hulse for at least the above reasons. It follows that all claims dependent upon claim 1 are also patentable due to their dependency.

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For all of the foregoing reasons, claims 1-4 and 6-17 are believed to be allowable and further favorable action is respectfully requested.

Respectfully submitted,

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A handwritten signature in cursive script, appearing to read "Joseph J. Jochman".

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